

DROUIN EXHIBIT 1

REPORT OF MICHLLE A. DROUIN. Ph.D.

I affirm under the penalties of perjury that the contents of the foregoing paper are true to the best of my knowledge.

1. All of the data considered for the basis of this report are survey studies involving undergraduate and/or young adult populations that have been published in the past five years (2008 to 2013). The research methodology for Drouin and Landgraff (2012) and Drouin, M., Vogel, K. N., Surbey, A., and Stills, J. R. (2013) is described in detail in Exhibits A and B, respectively.

2. I have been asked to attach as Exhibit “A” a copy of Drouin, M., & Landgraff, C. (2012). Texting, sexting, attachment, and intimacy in college students’ romantic relationships. *Computers in Human Behavior*, 28, 444–449. This paper presents prevalence data (self-reported) for sexting involving visual depictions among college students in committed relationships at a Midwestern university.

I have been asked to attach as Exhibit “B” a copy of Drouin, M., Vogel, K. N., Surbey, A., & Stills, J. R. (2013). Let’s talk about sexting, baby: Computer-mediated sexual behaviors among young adults. *Computers in Human Behavior*. This paper presents prevalence data (self-reported) for sexting involving visual depictions for sexting among college students in various types of romantic relationships (committed, casual sexual, and cheating) at a Midwestern university.

3. I am an Associate Professor of Psychology at Indiana University - Purdue University Fort Wayne. My principal area of research involves the impact of technology on communication and relationships. Attached is a copy of my Curriculum Vitae which includes my education, training and professional background including publications (Exhibit C).

4. I am receiving \$1500.00 as compensation for the completion of this report.
5. I have never before served as an expert witness.
6. In this report, I will provide a statement of all of my opinions regarding the prevalence of sexting involving visual depictions among college students and young adults, beginning with the bases and reasons for them.

In Drouin and Landgraff (2012), we examined the frequency of sexting involving visual depictions among college students from a mid-sized Midwestern university who had been in *committed* romantic relationships (233 men and 511 women). Of those who indicated that they had been in a committed relationship (744/878), 54% (402) indicated that they had sent sexually-explicit picture or video messages within their “most significant (either current or past) committed relationship.” Participants reported sending sexually- explicit picture or video messages within their most significant committed relationships with these frequencies:

- 45.9% (342) indicated that they *never* sent them
- 14.8% (110) indicated that they *very rarely* sent them
- 10.6% (79) indicated that they *rarely* sent them
- 21.9% (163) indicated that they *occasionally* sent them
- 5.4% (40) indicated that they *often* sent them
- 1.5% (11) indicated that they *very often* sent them

In a follow-up study (Drouin, Vogel, Surbey & Stills, 2013) that included 253 *young adult* college students (105 men and 148 women, aged 18-26) from the same Midwestern university, we examined the frequency of sending different types of sexually-explicit picture and video messages within different types of romantic relationships. In this sample, 49% (99/202) of those who reported having had a committed relationship indicated that they had sent a sexually-

explicit text or picture message to their most significant committed partner. Meanwhile, 37% (46/123) of those who reported having had a casual sexual relationship had sent a sexually-explicit text or picture message to their casual sex partner, and 45% (24/53) of those who reported having had a cheating relationship had sent a sexually-explicit picture or video message to their cheating partner.

Participants in this recent study (Drouin et al., 2013) were also asked to indicate what medium (i.e., text, Facebook, Twitter or email) they used to send sexually-explicit visual content and what types of sexually-explicit visual content they had sent to various types of romantic partners. As Table 2 in Exhibit B (Drouin et al., 2013) shows, participants in all relationship types reported sending sexually-explicit visual content most often via text message: 38%-50% of respondents reported sending sexually-explicit photos or videos via text message. The other mediums (Twitter, email, and Facebook) were used less frequently: 1%-11% of respondents reported using these other mediums for sending sexually-explicit photos or videos. Because text messages were used most frequently to send sexually-explicit visual depictions, this medium was used for the analyses about sexual content. The prevalence of different types of sexual content sent via text message in different relationship contexts is depicted in Figure 2 in Exhibit B (Drouin et al., 2013). As Figure 2 (Exhibit B) shows, participants reported sending various types of sexually-explicit material to romantic partners. For example, almost one in five people who had been in a committed relationship or a casual sexual relationship had sent an entirely nude picture or video to their partner, and a similar number (approximately one in five) of those who had been in a committed, casual sex, or cheating relationship had sent a sexually suggestive, but clothed picture or video to their partner. Nearly nude images were even more prevalent; approximately one third of those who had been in committed or cheating relationships had sent a

nearly nude image of themselves to their romantic partner. Meanwhile, one in ten people who had been in a committed or cheating relationship had sent a picture or video of themselves in a solo sexual act (e.g., masturbating) to their partner.

Overall, approximately half of the college students in these combined samples indicated that they had sent a sexually-explicit picture or video message via text message. This is a higher prevalence than the 20.5% of Hispanic young women ($N = 207$) at a university in the southern part of the United States who “reported sending erotic or nude photographs of themselves to others at least once” (p. 241; Ferguson, 2011). Differences in the definition of sexting and the composition of the samples (e.g., sex, relationship status, geographic area, ethnicity) may have contributed to these differences in prevalence. These disparate results (and methods) also make it difficult to generalize our findings to a national sample. However, if the findings from Drouin and Landgraff (2012) and Drouin et al. (2013) could be generalized, then a large number of U.S. college students (approximately 8.6 million) may have transmitted sexually-explicit visual depictions via text message. These estimates are based on recent U.S. census survey data that show that there were approximately 20,427,700 students enrolled in undergraduate institutions in 2009 and the findings from Drouin and Landgraff’s (2012) study in which 84.7% of the 878 undergraduates indicated that they had ever had a committed relationship (thus, 17,299,721, or 84.7% of 20,427,700, undergraduates may have had a committed relationship). This estimate of 8.6 million excludes those who have not been in romantic relationships and those who are not enrolled in undergraduate institutions.

This estimate cannot be made, however, in a straightforward manner as has been described above. Too few research studies have examined this topic among undergraduates in the United States to make reasonable, scientific estimates of the prevalence of sexting involving

visual depictions within this group. Therefore, it may be more useful to examine the prevalence rates of sexting involving sexually-explicit visual depictions among all young adults, not limited to undergraduates. In this area, more work with larger samples has been published, and estimates can be made with more scientific certainty. As it is quite possible that the cohort of students at our undergraduate institution in the Midwestern United States (Drouin & Landgraff, 2012; Drouin et al., 2013) is qualitatively different somehow from young adults in other parts of the country, it is prudent to compare our results with those studies involving larger samples of U.S. participants.

Data presented on this topic in national survey studies (Associated Press & MTV, 2009; Gordon-Messer, Bauermeister, Grodzinski, & Zimmerman, 2012; National Campaign to Prevent Teen and Unplanned Pregnancy, 2008) has shown consistently that approximately one third of young adults have been involved in sexting involving sexually-explicit visual depictions (descriptions of sexting behaviors have varied across studies). In my opinion, the lower incidence of sexting involving visual depictions that has been found in these larger survey studies, in comparison to my studies, is due to sample differences. Most notably, these larger studies surveyed participants all across the United States, and they did not limit their respondents to only those in committed relationships. As those within committed relationships appear to send more sexually-explicit visual depictions than those in other relationship types (Drouin et al., 2013), prevalence rates for sending sexually-explicit visual material in the Drouin and Landgraff (2012) and Drouin et al. (2013) samples are likely higher than they would be for the general population of young adults.

With consideration for all of these findings, my opinion is that approximately one third of *young adults* (aged 18-24) have sent text messages involving sexually-explicit visual depictions.

I hold this opinion to a reasonable degree of scientific certainty. According to recent census data (Howden & Meyer, 2011), there were 30,672,088 young adults (18-24) in the United States in 2010. Extrapolating from this data, I would estimate that approximately 10.2 million young adults have sent text messages involving sexually-explicit visual depictions.

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DROUIN EXHIBIT 2



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Texting, sexting, and attachment in college students' romantic relationships

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ABSTRACT

In this study, we explored how texting and sexting practices are related to attachment in college students' ($n = 744$) committed romantic relationships. Participants completed a survey containing questions about their texting and sexting practices and attachment styles with relationship partners. Results showed that texting and sexting are relatively common in young adult romantic relationships, and texting and sexting are both significantly related to attachment style. However, whereas text messaging was more common among those with secure attachments (i.e., those with less attachment avoidance), sexting (both texts and pictures) was more common among those with insecure attachments, particularly those with higher attachment avoidance. Whereas anxious attachment predicted variance in sending sex text messages only, attachment avoidance contributed unique variance in sending both sex texts and pictures. This relationship was moderated by gender—avoidant men were more likely than avoidant women to send sex text and picture messages to relationship partners.

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1. Introduction

In this fast-changing landscape of interpersonal communication, mobile technologies are increasingly being used to forge and sustain social relationships (Gross, 2004; Lenhart et al., 2010; Lewis & Fabos, 2005; Licoppe, 2004; Van Kleemput, 2010). More specifically, text messaging is beginning to dominate the landscape of interpersonal communication, having surpassed voice calls in popularity, especially among teenagers and young adults (Lenhart et al., 2010; Nielsen Online, 2009). Although some researchers have focused on the positive aspects of these new technologies in the facilitation of social relationships (Lewis & Fabos, 2005; Licoppe, 2004), numerous media accounts have portrayed the impact of these technologies in a negative light. For example, reporters have suggested that a "texting craze" has gripped the US (Visco, 2008). More recent media reports have been even more distressing, suggesting that sexting (sending sexually explicit messages via text or picture messages) is "shockingly common among teens" (CBS News, 2009). And these headlines have not escaped the attention of local authorities, who, in some cases have charged teens with criminal possession and distribution of child pornography for possessing or forwarding nude pictures (Brunker, 2009).

Although a great amount of attention (often negative) has been devoted to texting and sexting, there has been relatively little discussion about the normality of these behaviors within the current

climate of interpersonal relationships. Clearly, texting is popular: 72% of all teens report that they use text messaging, and those that are text messaging report sending approximately 3000 texts per month (Lenhart et al., 2010). However, studies examining the social and psychological characteristics of those who engage in texting are just beginning to emerge (Ishii, 2006; Jin & Peña, 2010; Pierce, 2009; Reid & Reid, 2010). Sexting appears to be relatively less common: a recent survey of sexting behaviors revealed that 20% of teens (13–19) and 31% of young adults (20–26) have sent or posted sexually explicit picture messages (The National Campaign, 2008). Policymakers have just recently begun to address the pervasiveness and severity of this issue among minors. For example, the California State Senate has recently passed a no-sexting bill (SB919) that allows for expulsion of students who engage in sexting on school property or on the way to or from school (Lee, 2011). However, there have been few empirical studies that have examined either the prevalence of sexting in adults or the psychological or social characteristics of adults who send sex messages. The only known study on the latter topic is a very recent study by Weisskirch and Delevi (2011). These researchers examined sexting as it relates to attachment characteristics, which is a promising line of inquiry that has shed some light on the motivations behind sexting. However, due to their limited sample size and the few men that were involved in the study ($n = 22$), the generalizability of their results is limited.

Early attempts to define and delineate attachment styles were based on infants' attachment to their primary caregivers (Ainsworth et al., 1978), but an increasingly wide body of research has examined the concept of attachment with regard to adult relationships (Brennan et al., 1998; Bartholomew & Horowitz, 1991; Hazan & Shaver, 1987; Mikulincer & Shaver, 2003, 2007). Within this research,

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attachment was originally defined categorically—individuals were described as secure, anxious, or avoidant based on their response patterns (Ainsworth et al., 1978; Hazan & Shaver, 1987). In contemporary research, a model based on the two orthogonal dimensions of *anxiety* and *avoidance* (Brennan et al., 1998) is most widely used.

Within the context of romantic relationships, those who exhibit *anxious attachment* demonstrate both an intense desire for closeness and an intense fear of abandonment or separation. Anxiously attached individuals are also likely to seek approval from others and feel distressed when their needs for proximity to their partners are unmet. Meanwhile, those who exhibit *avoidant attachment* have a fear of dependence, self-disclosure, and intimacy, choosing to be self-reliant and independent, even within the context of close relationships. According to Mikulincer and Shaver (2003, 2007), these different attachment styles give rise to different relationship strategies. Highly anxious individuals tend to employ “hyperactivating” strategies, or attempts to draw their partner closer, in response to their fears of losing their partner’s interest. Meanwhile, highly avoidant individuals employ “deactivating” strategies, or attempts to distance themselves from partners so that they are neither dependent on nor relied upon for emotional support.

Although few known studies have examined the relationships between *text messaging* and relationship characteristics, specific directional predictions about text messaging and attachment can be made based on the existing communication literature. Research has shown that mobile phones support a connected presence, which would be useful in sustaining close, committed relationships (Licoppe, 2004). With regard to text messaging specifically, studies have shown that text messaging helps to strengthen bonds and foster intimacy, mainly within existing dyadic relationships (Hian et al., 2004; Ishii, 2006). However, texting is viewed by some as a less intimate form of communication than voice calls (Reid & Reid, 2010), and those who prefer voice calls to communicate with relationship partners tend to have higher levels of intimacy (Emmers-Sommer, 2004), love, and commitment, and lower levels of relational uncertainty (Jin & Peña, 2010). Thus, text messaging would probably be used less often among those with insecure attachment styles, either because of a need for greater certainty in their relationship (anxiously-attached individuals) or an aversion to intimacy within the relationship (avoidantly-attached individuals). In contrast, among those with secure relationship styles, text messages would likely be used more often, to sustain relationship bonds and foster intimacy.

With regard to *sexting*, recent work has shown a positive relationship between sexting behaviors and attachment anxiety within the context of relationships (Weisskirch & Delevi, 2011). Weisskirch and Delevi (2011) found that attachment anxiety was related to propositioning sex in messages, but this relationship was significant only among those in relationships, and attachment style did not relate significantly to any other sexting behaviors (e.g., sending a sexually suggestive text message or nude photo). In their conclusions, the authors hypothesized that anxiously-attached individuals might use sexting as a means to elicit a response or seek reassurance from their partners. This corresponds to research that suggests that anxiously-attached individuals may use sex to gain reassurance that their partner is emotionally invested in the relationship (Davis et al., 2004). However, because of the limited number of people in the study ($N = 128$), the even smaller proportion in relationships (58%), and the predominance of women in the sample ($n = 106$), it is not known whether the non-significant relationships found between anxious attachment and sexting behaviors are a result these sample limitations, or if the results are generalizable to larger, more representative samples of people who are in relationships. Thus, a goal of this study was to confirm this association between sexting behaviors (within relationships) and anxious attachment in a larger sample that includes more men.

Interestingly, there were no significant relations found between sexting and avoidant attachment in the Weisskirch and Delevi (2011) study. Attachment literature would suggest that sexting would be appealing to those with attachment avoidance, who may engage in more frequent sexual activity, especially casual sex (Brennan & Shaver, 1995; Feeney & Noller, 1990; Feeney et al., 1993; Gentzler & Kerns, 2004; Schmitt, 2005). Casual sex allows individuals to have sexual experiences without commitment or attachment. Those with secure attachments usually prefer to have sex within the context of committed relationships (Brennan & Shaver, 1995) as an expression of the emotional intimacy they feel for their partners (Tracy et al., 2003). However, those who are avoidantly attached do not necessarily associate physical and emotional intimacy (Gentzler & Kerns, 2004; Mikulincer & Shaver, 2007; Schachner & Shaver, 2004; Schmitt, 2005), which makes casual sex, an act devoid of emotional intimacy or attachment, more appealing. For those in committed relationships, sexting might be the sexual interaction that most closely resembles casual sex, because partners maintain a physical distance, and the interchange requires very little emotional attachment or intimacy. Therefore, sexting would allow individuals with avoidant attachments to engage in sexual acts with partners without investing either physical or emotional intimacy.

The non-significant relationships between sexting and avoidant attachment in the Weisskirch and Delevi (2011) study might be attributable to the gender distribution of the participants. In their study, only 22 of the total participants were men. It is very likely that gender plays a moderating role in the relationship between sexting and attachment because there appear to be gender differences in both attachment styles and the ways in which attachment relates to sexual behaviors. The differences between men and women that are most relevant to the present study relate to attachment avoidance and their attitudes toward casual sex and masturbation. More specifically, men tend to be more avoidant, have more positive views of casual sex and masturbation, and at least among college students, are more likely to agree to have casual sex than women (Bartholomew & Horowitz, 1991; Brennan et al., 1998; Clark & Hatfield, 1989; Peterson & Hyde, 2010). As mentioned, sexting, because it requires little emotional investment, could be considered a form of casual sex. Additionally, sexting, like other forms of cybersex, may include masturbation (Cooper & Griffin-Shelley, 2002). Considering these findings together, we expect the relations between sexting and attachment avoidance to be particularly strong for men.

1.1. The present study

In this study, we explored the relations between text messaging, sexting, and attachment styles within college students’ romantic relationships. Based on previous surveys of young adult samples in the US, we hypothesized that both texting and sexting would be relatively common in the relationships of young adults. Additionally, based on the attachment literature, we hypothesized texting and sexting frequency within relationships would be related to attachment style. More specifically, we expected anxious and avoidant attachment to be negatively related to sending text messages to relationship partners. For those with anxious attachments, text messages may be viewed as a less intimate form of communication than others (e.g., voice calls), and for those with avoidant attachments, text messages might be viewed as creating a connected presence, which these individuals would want to avoid. In contrast, we expected anxious and avoidant attachment to be positively related to sending sex messages to relationship partners. For anxiously-attached individuals sexting could be used as a hyperactivating strategy or a reassurance-seeking behavior (Weisskirch & Delevi, 2011), and for avoidantly-attached individuals, sexting

could be used as a form of casual sex. As the definition of online sexual activity includes using either text or graphics for sexual purposes (Cooper & Griffin-Shelley, 2002), we included questions about both sexually explicit text and picture messages. However, because these actions require different kinds of self-disclosure (e.g., only picture messages involve disclosure of physical features), we analyzed them separately to determine if there were any differences in either frequency of the behavior or the relationship between these behaviors and attachment styles. Finally, we expected gender to moderate the relationship between attachment and sexting, especially for attachment avoidance.

2. Method

2.1. Participants

The sample consisted of 744 college students (233 men and 511 women) from a medium-sized university in the midwestern United States. Participants were recruited from introductory psychology classes during two consecutive semesters and received a research credit for participation. From a larger sample ($N = 878$), only those participants indicating that they had been in a committed relationship were included in this study. The average length of the committed relationship was 2 years, 4 months ($SD = 30.42$ months); 485 (65%) specified that the relationship was current; 257 (35%) specified that it was a past relationship; and two participants did not specify whether it was a current or past relationship. For those who were reporting on a past relationship, the past relationship ended within the last year and a half (on average), which is well within the time period of availability of text message technologies. Participants ranged in age from 18 to 36 ($M = 20.50$, $SD = 3.67$) and were largely Caucasian (85% White (Non-Hispanic); 7% African American; 3% Hispanic; 2% Asian; and 2% Biracial or other ethnicity) and unmarried (82% were unmarried, 6% married, 2% divorced, and 9% living with a significant other). They were mostly in their first year of undergraduate study (75% first year, 19% second year, 5% third year, 2% fourth year) and reported various major fields of study (more than 48 different majors were represented). The average number of text messages sent per month (to all persons) was 2298 ($SD = 3181$; Range 0–30,000).

2.2. Procedure

All participants completed online consent forms and were then given access to an online anonymous survey. The first part of the survey consisted of basic demographic questions as well as questions related to the participants' general use of communication media (e.g., texting, Facebook, and phone). The second part of the survey consisted of several intimacy and attachment scales, which included questions related to attachment in romantic relationships. The final part of the survey contained questions regarding texting, sexting, and preferences for sexual communication in the context of close committed relationships and in the context of casual sexual relationships. Only the data related to participants' close, committed relationships are reported here.

2.3. Measures

2.3.1. Attachment

As a measure of attachment, participants completed the 12-item short form of the Experiences in Close Relationships scale (ECR; Wei et al., 2007). The ECR measures attachment in relationships along two dimensions: anxious (e.g., "I need a lot of reassurance that I am loved by my partner") and avoidant (e.g., "I try to avoid getting too close to my partner"). Participants rate their level of agreement with each statement on a 7-point Likert scale (rang-

ing from 1 = *disagree strongly* to 7 = *agree strongly*). Higher scores indicate higher levels of anxious or avoidant attachment in close relationships (Anxious $\alpha = .72$; Avoidant $\alpha = .85$).

2.3.2. Texting and sexting practices

Participants answered questions regarding the frequency with which they sent text messages, "sexually explicit text messages," and "sexually explicit picture and video messages" to relationship partners. Participants were asked to report the frequency of these behaviors within their "most significant (either current or past) committed relationship." They were further informed "this would be a person with whom you shared an intimate relationship, like a serious boyfriend or girlfriend, and would NOT be just a casual fling or person with whom you were involved only sexually." The participants responded to the texting and sexting statements on a 6-point Likert scale (ranging from 0 = *never* to 5 = *very frequently*).

3. Results

The major goals of this study were to examine the prevalence of texting and sexting in young adult romantic relationships and analyze the associations between texting, sexting, and attachment styles within these relationships. As a preliminary analysis, we examined the associations between sociodemographic variables (age, length of time in relationship, and marital status—ever (1) or never (0) married) with regard to our texting and sexting frequency measures. All three variables were significantly related to sending text messages (age: $r = -.21$, $p < .01$; length of time in relationship: $r = -.20$, $p < .01$; and marital status: $r = -.20$, $p < .01$), but none were significantly related to sending sex text or sex picture messages; therefore, these variables were included in subsequent regression analyses as control variables for texting only.

Additionally, one of our hypotheses was that the relationships between texting, sexting, and attachment might be moderated by gender. Therefore, as a preliminary analysis, we examined whether men and women were significantly different in the variables of interest. As shown in Table 1, men and women reported sending text and sex messages with relatively equal frequency. With regard to attachment, women scored higher on anxious attachment, but not significantly so, and men scored significantly higher in attachment avoidance. Thus, gender was included as a moderating variable in the subsequent sexting analyses.

3.1. Prevalence of texting and sexting in romantic relationships

To examine prevalence of texting and sexting within our entire sample, we asked participants to indicate how frequently they sent text, sex text, and sex picture messages to their relationship partners. Table 2 shows the distribution of these frequencies. Not surprisingly, most of the sample (98%) had sent text messages to their relationship partners. A smaller majority also reported sending sexually explicit text messages (67%) and sending sexually explicit pictures or videos (54%) to their relationship partners more than

Table 1

Means, standard deviations, and significant differences between men and women for texting, sexting, and attachment measures.

Measure	Men <i>M</i> (<i>SD</i>)	Women <i>M</i> (<i>SD</i>)	<i>t</i> (744)	<i>d</i>
Send text messages	4.95 (1.05)	4.92 (1.20)	0.39	0.03
Send sex picture messages	2.29 (1.44)	2.30 (1.44)	−0.17	−0.01
Send sex text messages	2.64 (1.39)	2.57 (1.40)	0.66	0.05
ECR Anxious	3.58 (1.25)	3.64 (1.22)	−0.64	−0.05
ECR Avoidance	2.58 (1.19)	2.25 (1.17)	3.55**	0.28

Note. * $p < .05$.

** $p < .01$.

Table 2

Number and (percentage) of participants who indicated sending text, sex text, and sex picture messages to relationship partners.

Variable	Never	Very rarely	Rarely	Occasionally	Often	Very often
Send text	16 (2.1%)	27 (3.6%)	29 (3.9%)	115 (15.4%)	293 (39.4%)	265 (35.6%)
Send sex text	245 (32.9%)	137 (18.4%)	100 (13.4%)	202 (27.1%)	57 (7.7%)	4 (0.5%)
Send sex pictures	342 (45.9%)	110 (14.8%)	79 (10.6%)	163 (21.9%)	40 (5.4%)	11 (1.5%)

never. Thus, with regard to our first research question of interest, most individuals in our sample had engaged in both text and sex messaging with their relationship partners. Although they engaged in text messaging with greater frequency, almost 1/3 of the sample had engaged in sex messaging with their relationship partner at least occasionally. Thus, text and sex messaging appear to be relatively common within the committed relationships of young adult college students, and our hypothesis was supported.

3.2. Texting, sexting, and attachment

To determine whether texting and sexting behaviors were related to attachment, we first conducted zero-order correlational analyses. See Table 3 for the descriptive statistics for these measures and their zero-order correlations.

As the attachment measures were significantly related to texting and sexting behaviors, we also conducted a series of hierarchical forced-entry regressions to explore the unique contributions these variables to texting and sexting, including gender as a moderator. As suggested by Aiken and West (Aiken & West, 1991), we centered non-categorical predictor variables on their means, and we dummy coded men as +1 and women as −1. For the sexting measures, we entered gender as control variable in the first step. In the second step, we entered the attachment variables (anxious and avoidant measures) to measure the unique contribution of attachment style to sexting behaviors. In the third step, we entered the interactions between attachment style and gender (anxious by gender and avoidant by gender) as we hypothesized that gender might moderate the relationship between attachment and sexting, especially for attachment avoidance. For the texting measure, we entered age, gender, length of relations, and marital status as control variables in the first step and then proceeded with the next two steps.

3.2.1. Texting and attachment

As shown in Table 4, a significant model emerged for texting, predicting 7% of the variance in sending text messages. Of the attachment variables, only attachment avoidance emerged as a significant predictor of texting; those with higher attachment avoidance were less likely to text their partners. Thus, our hypothesis was partially supported. Age and length of relationship also

Table 3

Correlations between and descriptive statistics for participants' reported texting, sexting, and attachment styles.

	1	2	3	4	5
1. Send text	–				
2. Send sex picture	.07*	–			
3. Send sex text	.19**	.72**	–		
4. Anxious Attachment	−.04	.09**	.11**	–	
5. Avoidant Attachment	−.10**	.13**	.11**	−.58**	–
<i>M</i>	4.93	2.59	2.30	3.62	2.35
<i>SD</i>	1.15	1.40	1.43	1.23	1.18

Note. For texting and sexting measures (measures 1–3), participants answered on a scale of 0–5. For attachment (measures 4 and 5) participants answered on a scale of 1–7.

* $p < .05$.** $p < .01$.**Table 4**Hierarchical regression analyses for sending text messages as a function of attachment style and attachment \times gender.

Variables	<i>B</i>	<i>SEB</i>	β	ΔR^2
Step 1				.05**
Age	−.05	.01	−.16**	
Gender	.02	.04	.01	
Length of relationship	.00	.00	.00	
Marital status	−.40	.17	−.10*	
Step 2				.01**
Anxious	−.03	.03	−.03	
Avoidant	−.09	.03	−.10*	
Step 3				.01**
Gender \times anx	.03	.04	.03	
Gender \times avoid	−.03	.04	−.03	
Total				.07**

Note. Gender: −1 = Women; 1 = Men. Anx = Anxious; Avoid = Avoidant. Marital status −1 = Never Married; 1 = Married.

* $p < .05$.** $p < .01$.

contributed uniquely to the variance in texting; those who were older and in relationships longer reported sending fewer text messages to relationship partners.

3.2.2. Sexting and attachment

As shown in Table 5, significant models also emerged for sexting. In this case, the models predicted 3% and 4% of the variance in sending sex text and picture messages, respectively. Although a small amount of variance was accounted for by our predictor variables, the model was significant, and the fact that attachment styles emerged as significant predictors as we predicted is a notable finding. Both attachment anxiety and attachment avoidance were significant predictors of sending *sex text* messages; however only attachment avoidance emerged as a predictor of *sex picture* messaging. In all cases, and in line with our hypotheses, those with anxious or avoidant attachments were *more likely* to send sex messages.

3.2.3. Gender as a moderator between sexting and attachment

With regard to the interaction effects, gender emerged as a moderator between avoidant attachment and sexting, as predicted. For

Table 5Hierarchical regression analyses for sending sex text and picture messages as a function of attachment style and attachment \times gender.

Variables	Sending sex texts				Sending sex pictures			
	<i>B</i>	<i>SEB</i>	β	ΔR^2	<i>B</i>	<i>SEB</i>	β	ΔR^2
Step 1				.00				.00
Gender	.02	.04	.02		.00	.04	.00	
Step 2				.02**				.02**
Anxious	.08	.03	.09*		.05	.03	.06	
Avoidant	.09	.03	.09*		.11	.03	.12**	
Step 3				.01**				.02**
Gender \times anx	−.05	.04	−.05		−.08	.04	−.08	
Gender \times avoid	.11	.04	.11**		.14	.04	.13**	
Total				.03**				.04**

Note. Gender: −1 = Women; 1 = Men. Anx = Anxious; Avoid = Avoidant.

* $p < .05$.** $p < .01$.

both sending sex texts and sex pictures, the interaction effect was significant for gender \times avoidance. Simple slope analyses showed that the associations for sex text messaging and avoidance were stronger for men ($\beta = .34, p < .001$) than for women ($\beta = .10, p < .05$), and associations between sex picture messaging and attachment avoidance were also stronger for men ($\beta = .43, p < .001$) than for women ($\beta = .13, p < .01$). In other words, avoidant men were more likely to send sex messages to relationship partners than avoidant women. Meanwhile, the predictive relationships for attachment anxiety \times gender just missed reaching significance for sending sex pictures ($p = .051$). In this case, the relationship was nearly significant for women, but not for men.

4. Discussion

In our current landscape of technological communication, it has become increasingly common for young adults to navigate their social relationships via technology, such as text messaging. Thus, it is not surprising that recent studies (The National Campaign, 2008; Weisskirch & Delevi, 2011) have found that teens and young adults are using these technologies to navigate their sexual relationships, via sexting. However, little research has examined the psychological characteristics that underlie these behaviors. In a recent study by Weisskirch and Delevi (2011), researchers examined sexting within a framework of attachment theory, which proved to be a promising line of inquiry. In their study, they found that attachment anxiety was related to propositioning sex, but only for those in relationships.

In this study, we expanded upon the Weisskirch and Delevi (2011) study, by including a larger sample with more men. Because attachment theory relates mainly to attachment within relationships, we directed our inquiry towards those who were or had been involved in a serious, committed relationship, and we asked them to report the frequency of their texting and sexting behaviors within the context of that relationship. We also extended our inquiry to include both text messaging and sex messaging, as we hypothesized that both means of communication within relationships (non-sexual and sexual) would be related to attachment style.

With regard to *texting and attachment*, our results give some insight into the psychological characteristics of those who use text messaging as a means of communicating with relationship partners. Correlational analyses showed that both insecure attachment styles (avoidant and anxious) were negatively related to sending text messages, but this relationship was significant only for avoidant attachment. Further, in our regression analysis, attachment avoidance emerged as a predictor of sending text messages to relationship partners, even after controlling for age, length of relationship, and marital status. This finding aligns with one of our proposed hypotheses—that those who are avoidantly attached, who fear intimacy and want to avoid self-disclosure and dependence, would text their partners less frequently because they want avoid activities that sustain proximity and build intimacy. However, our other hypothesis—that those with anxious attachment would text message relationship partners less frequently because it is a less intimate form of contact—was not supported. There was a negative relationship between attachment anxiety and texting within relationships, but the relationship was not significant. This may be because those with anxious attachments use text messaging as a substitute for more intimate forms of communication (e.g., voice calls or face-to-face conversations) when these interactions are not possible. This is a direction for future research. Considered together, our analyses show that text messaging between relationship partners is associated with more secure relationship styles. Future studies should consider how relationship partners use text messaging as compared to other emerging technologies

(e.g., Facebook messages) and how these different methods of communication relate to attachment style.

With regard to *sexting and attachment*, our findings align reasonably well with our original hypotheses. Those with anxious and avoidant attachment styles engaged in sexting with relationship partners more frequently; however, in regression analyses, only attachment avoidance was a significant predictor of sending both sex texts and pictures. Anxious attachment emerged as a significant predictor for sending sex texts only, but once gender was considered as a moderator, attachment anxiety was a predictor for sending sex pictures for women only (this relationship just missed reaching significance). Meanwhile, men who were avoidant were more likely to send sex texts and pictures. These findings differ from results reported by Weisskirch and Delevi (2011), who found that only attachment anxiety was significantly related to sexting behaviors. The differences between these findings highlight the need to examine sexting behaviors *within relationships* in larger samples of individuals where the gender distribution is not as skewed and to examine gender as a moderating variable.

Overall, our findings with regard to attachment avoidance are in line with our predictions—that those with attachment avoidance were more likely to engage in sexting, just as they are more likely to engage in casual sex (Brennan & Shaver, 1995; Feeney et al., 1993; Gentzler & Kerns, 2004) and be prone to sexual addiction (Zapf et al., 2008). It is therefore possible that sexting is a form of casual sex and/or a symptom of sexual addiction. It is also possible that those with avoidant attachments are using sexting as a deactivating strategy, engaging in sexual interactions devoid of physical intimacy because they want to keep their partners at a distance. This might be particularly appealing to the avoidantly-attached individuals who want to avoid sex (Cooper et al., 1998; Gentzler & Kerns, 2004), who might view sexting as a palatable alternative to physical sex because they are averse to physical intimacy or normative sexual behavior (Brennan et al., 1998). To determine whether relationships between sexting, casual sex, sexual addiction, or sex avoidance exist and whether these relationship strategies are active during sexting, further quantitative and qualitative studies will be necessary. This study provides a preliminary direction for this research.

4.1. Limitations and conclusion

The most notable limitation of this study is the relatively small amount of variance in texting and sexting that the attachment variables predicted. Although the effects were significant, with a sample size this large, these significant effects are rather easily detected. Because the significant effects aligned with our predictions, our results are meaningful from a theoretical standpoint. That said, clearly, other variables aside from attachment are predicting texting and sexting behaviors with relationship partners. Fortunately, the aims of this study were not to explain texting and sexting in their entirety, but rather to begin to explore the variables that relate to these behaviors. So that we can develop useful models of texting and sexting, future studies should include measures of other types of personality characteristics that may be related to these behaviors, such as self-esteem, loneliness, and impulsivity. An additional limitation is that our measures may not have been sensitive enough to capture the complexity of the texting and sexting behaviors and interactions. For example, our texting and sexting measures were direct, single-item questions. These single-item measures do not allow for reliability analyses, and it is probable that both texting and sexting are multi-dimensional behaviors that need to be measured with multiple items. Therefore, future studies should include multi-item measures of texting and sexting behavior.

Another limitation relates to honesty for the self-report measures: it is possible that the participants did not provide accurate

or honest reports of their texting and sexting behaviors. In particular, it seems probable that some people would be hesitant to report that they sent sex pictures and texts, because sexting is controversial and assumed to be non-normative. It would be useful to include different methods of self-report, such as participants providing their own definitions for and frequencies of text and sex messaging. Finally, this study examined texting and sexting within a college sample and only within the context of close, committed relationships. Although these college students may be representative of most American young adults, this limits the generalizability of the findings. Additionally, although we believe it would be meaningful to examine these behaviors within the context of different types of relationships (e.g., friendships and casual sexual relationships), this was not the aim of this study. Future work will include comparisons of texting and sexting behavior within close committed relationships and within casual sexual relationships.

Despite these limitations, this study extends our knowledge of the interactions that occur within contemporary romantic relationships of young adults. Mobile communication appears to play a large role in young adults' romantic relationships. However, although texting appears to be related to secure attachment patterns, sexting is related to insecure attachment patterns, especially attachment avoidance among men. As teens and young adults navigate their relationships in this changed social landscape, it is important that they be aware of the personality and relationship characteristics that underlie their actions. Moreover, from a legal and educational policy standpoint, understanding these interactions may help policymakers and school administrators develop intervention strategies that target the underlying motivations behind these behaviors.

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DROUIN EXHIBIT 3



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Let's talk about sexting, baby: Computer-mediated sexual behaviors among young adults

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ABSTRACT

Although much media attention has been directed towards sexting (transmission of sexual material via phone or internet), little empirical work exists on the topic. Moreover, the few studies that do exist have been inconsistent in their definition of sexting and measures of sexting behavior, which makes comparisons between these studies difficult. In this study, we provide a granular, descriptive analysis of sexting behavior within a cohort of young adults, focusing on the content of sex messages, the medium used to transmit these messages, and the relationship context in which these transmissions occur. We found that sexting was fairly common across all types of romantic relationships (committed, casual sex, and cheating), text messaging was the primary medium used to send sex pictures and videos, and the prevalence, motivations, and risks associated with sexting varied by relationship context. Considering the complexity and diversity of sexting practices within this cohort, we suggest that those studying sexting and implementing initiatives with young adults use more detailed (rather than general) definitions and questions of sexting behavior, and that they delineate between these different types of content, transmission media, and relationship contexts.

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1. Introduction

During the past decade, methods of social communication have changed considerably, especially among young adults (Hampton, Goulet, Rainie, & Purcell, 2011; Lenhart, Ling, Campbell, & Purcell, 2010; Smith, 2011). Computer-mediated communication (CMC) now dominates the social landscape, and among young adults, texting and social networking prevail. Recent statistics show that young adults use text messaging much more often than voice calls (Smith, 2011), and most (approximately 80%) use a social networking service (e.g., Facebook or Twitter), often several times a day (Hampton et al., 2011). A number of researchers have begun to examine the use of these technologies within different relationship contexts (e.g., Manago, Taylor, & Greenfield, 2012), and recent research has focused on the use of these technologies within romantic relationships (Drouin & Landgraff, 2012; Elphinstone & Noller, 2011; Papp, Danielewicz, & Cayemberg, 2012; Weisskirch & Delevi, 2011). Within this body of research, one of the areas that has attracted much attention from media sources, school administrators, and legal authorities is the use of computer-mediated communication for transmitting sexual material (CMC-S), or “sexting”.

Few empirical studies have examined sexting, but those that have, have been rather inconsistent in the way they have defined sexting (Lounsbury, Mitchell, & Finkelhor, 2011). More specifically, there have been inconsistencies in the ways in which researchers have defined: (1) the *content* of messages, (2) the *medium* used to send messages, and (3) the relationship *context* within which these messages have been sent. In a recent study, Mitchell, Finkelhor, Jones, and Wolak (2012) helped to elucidate some of these issues using a large-scale telephone survey with children and teens (aged 10–17). Primarily, this research addressed issues that would be relevant from a legal standpoint; however, it also provided valuable information about the nature of sexting in this age group. Interestingly, despite the growing number of empirical studies with young adult samples (Drouin & Landgraff, 2012; Ferguson, 2011; Weisskirch & Delevi, 2011) and the fact that this group is the heaviest users of texting and cell phones (Ling, 2010; Smith, 2011), researchers have yet to clearly define ‘sexting’ among young adults. However, sexting among adults merits detailed study, as according to Weiss and Samenow (2010), there has been an increase in the number of people seeking treatment for problematic online sexual behaviors. Consequently, there is a need to examine empirically the role of technology in sexuality in this group (Weiss & Samenow, 2010). Thus, the goal of the present study was to disentangle these different aspects of sexting to provide a more detailed descriptive analysis of the sexting practices of young adults. This analysis is meant to serve as a baseline for researchers

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and practitioners in their development of sexting studies and initiatives with young adults.

1.1. Content of CMC-S

At present, the greatest inconsistency in the limited sexting literature concerns the definition of the *content* of sex messages. In one of the most widely-cited, seminal studies, Lenhart (2009) defined sexting as sending “sexually suggestive nude or nearly nude photos or videos of yourself” (p. 16). This was similar to the definition provided in the Sex and Tech Survey (National Campaign to Prevent Teen and Unplanned Pregnancy, 2008) of sending a “nude or semi-nude picture/video (of yourself)” (p. 11); however, the Sex and Tech Survey also included questions about sending “sexually suggestive material,” which could include non-picture sex messages. Another widely-cited study conducted by the Associated Press and MTV (2009) used both specific and general definitions, referring to sexting as either sharing a “naked photo or video” (p. 2) or “messages with sexual words or images by text or on the internet” (p. 2). More recently, Drouin and Landgraff (2012) used general definitions that differentiated “sexually explicit text messages” from “sexually explicit picture and video messages” (p. 446) and Ferguson (2011) defined sexting as sending “erotic or nude photographs” (p. 240). Meanwhile, Weisskirch and Delevi (2011) combined these various definitions, referring to sexting as “sending or receiving sexually-laden text messages, sexually suggestive photos or videos, or partially nude or nude photos or videos via cell phone” (p. 1698), but also asked four separate questions about content: (1) sexually suggestive photo or video, (2) photo or video in underwear or lingerie, (3) nude photo or video, and (4) sexually suggestive text. Unfortunately, this inconsistency in terminology makes comparability between previous studies almost impossible (Lounsbury et al., 2011). Moreover, it creates the need for research with young adults that delineates these different types of sexual content to determine whether the prevalence statistics vary by content. This will help researchers determine whether the definition of sexting needs to be broadened or limited and will also give some guidance on the interpretation of previous findings.

1.2. Medium used for CMC-S

Another inconsistency relates to the medium the person uses to transmit the sexual information. Some researchers have asked participants about their sending of sex messages over cell phones specifically (Lenhart, 2009; Weisskirch & Delevi, 2011), whereas others did not limit their questions about sexting to cell phones only (Associated Press & MTV, 2009; Drouin & Landgraff, 2012; National Campaign to Prevent Teen and Unplanned Pregnancy, 2008). Drouin and Landgraff (2012) and Ferguson (2011) did not specify a context, and the National Campaign to Prevent Teen and Unplanned Pregnancy (2008) and Associated Press and MTV (2009) asked questions about sex messages sent either by cell phone or the internet, but they did not delineate these two media types in their analyses. This is a potentially serious methodological issue because, as Lounsbury et al. (2011) suggest, cell phones are not the only medium through which sexually explicit material could be shared. In fact, prominent media sources gave great attention to a recent scandal involving a US congressman who sent sexually suggestive photos online via Twitter and Facebook (Canning & Hopper, 2011), which suggests that social networking sites are also being used to transmit sexual content. Therefore, a logical next step in this area of research is to determine the prevalence with which sexting occurs within different types of media (e.g., texting, Facebook, Twitter, email) so that researchers will have a guide for developing relevant sexting medium questions. This has already

been done with a child sample (Mitchell et al., 2012); these researchers found that text messaging was the most popular way to send photos of oneself, while instant messaging and social networking sites were used quite rarely to transmit sexual images. In our young adult sample, we expected similar trends, based on extremely high usage statistics for text messaging among young adults (Smith, 2011) as well as previous research that limited sexting questions to cell phones only but still found a fairly high incidence of sex messages (Lenhart, 2009; Weisskirch & Delevi, 2011).

1.3. Relationship contexts for CMC-S: Motivations, risks, and prevalence

Finally, there is also much inconsistency surrounding the relationship context in which the sexting interactions occur. Some researchers have presented prevalence statistics for different types of relationships, such as ‘significant others’, ‘romantic interests’, and people whom are known only in an online forum (Associated Press & MTV, 2009; Lenhart, 2009; National Campaign to Prevent Teen and Unplanned Pregnancy, 2008). However, the more recent studies on the topic (Drouin & Landgraff, 2012; Ferguson, 2011; Weisskirch & Delevi, 2011) did not differentiate between these various relationship types in their analyses. Although two of these studies examined attachment variables related to sexting, Drouin and Landgraff (2012) focused only on committed relationships, whereas Weisskirch and Delevi (2011) did not have participants specify a relationship context. According to the limited data presented on this topic in earlier survey studies (Associated Press & MTV, 2009; Lenhart, 2009; National Campaign to Prevent Teen and Unplanned Pregnancy, 2008) and the recent, more comprehensive study with children (Mitchell et al., 2012), relationship type may influence both prevalence and motivations for sexting. Consequently, researchers moving forward in this field should consider differences in sexting practices within the vast array of relationship types that exist in the population being studied.

In terms of the relationship types that are common among college students, recent studies have shown that committed relationships are still very popular; in fact, approximately 85% of Drouin and Landgraff’s (2012) sample reported having had one. They also showed that sexting is a popular means of sexual communication within these committed relationships: the majority of participants had sent sexually explicit texts (67%) or sexually explicit pictures or videos (54%) to their committed partners (Drouin & Landgraff, 2012). However, casual sexual relationships are also common among college students (Grello, Welsh, & Harper, 2006; Regan & Dreyer, 1999), as are cheating relationships (Grello et al., 2006). Approximately half of the sexually active college students in the Grello et al. (2006) and Regan and Dreyer (1999) samples had engaged in casual sex, and one-fifth of those who engaged in casual sex relationships had another romantic partner at the time of the encounter (Grello et al., 2006). Although sexting could provide an arena for initiating or sustaining sexual contact for casual sexual relationships, there is no known research that has examined the prevalence or motivations for sexting within this context. Presumably, there are different motivations and risks associated with sexting within different relationship contexts. For example, college students in committed relationships might engage in sexting to sustain intimacy with long-term partners who are physically absent (in military or at another university), whereas those in casual sex relationships—where the relationship is based on sex—might engage in sexting to initiate sex. Additionally, some key features of committed relationships—trust and intimacy—are often absent in casual sex or cheating relationships, which makes them somewhat ‘riskier’ in terms of the possibility that sex messages will be forwarded. Therefore, examining the prevalence, motivations, and risks associated with sexting in different relationship contexts

(committed, casual sexual, and cheating) may give us a more detailed picture of the sexting practices of young adults.

2. Methods

2.1. Participants

The sample consisted of 253 college students (105 men and 148 women) from a medium-sized university in the Midwestern United States. Participants were recruited from introductory psychology classes in Fall, 2011 and received a research credit for participation. From a larger sample ($N = 270$), only the young adult participants (aged 18–26) were retained. The average age of the participants was 19.47 years ($SD = 1.54$). Participants were largely Caucasian (79% White (Non-Hispanic); 8% Hispanic; 6% African American; 3% Asian; and 4% Biracial or other ethnicity) and unmarried (5% married, 2% divorced or separated). They were mostly freshmen (75% freshmen, 17% sophomores, 4% juniors, and 4% seniors) and reported various major fields of study (more than 42 different majors were represented). For those who indicated they were in a relationship at the time of the study ($n = 151$), 95% indicated that the relationship was heterosexual.

2.2. Procedure

All participants completed online consent forms and were then given access to an online anonymous survey. The survey contained general demographic questions, as well as specific questions about sexting, presented separately within the three relationship contexts of interest (committed, casual sex, and cheating), as defined below.

2.2.1. Relationship context definitions

At the beginning of each relationship subsection, participants were asked if they had ever been involved in that type of romantic relationship (i.e., committed, casual sex, or cheating). Only those who indicated they had been involved in that type of relationship answered the sexting questions in that subsection. For *committed relationships*, participants were asked to “think about your most significant (either current or past) committed relationship. This would be a person with whom you shared an intimate relationship, like a serious boyfriend or girlfriend, and would NOT be just a casual fling or person with whom you were involved only sexually”. For the section on *casual sexual relationships*, participants were asked to “think about your most significant casual sexual relationship (e.g., a casual fling or a hookup and NOT a boyfriend/girlfriend). This may be a person with whom you shared just a few sexual encounters or one with whom you shared many sexual encounters. In any case, you did not have a committed relationship with this person”. And finally, for the section on *cheating relationships*, participants were asked to “think about a person with whom you have cheated (i.e., the other man or woman). This could be a person with whom you had a casual sexual fling or a person with whom you had a long-standing relationship. In either case, this relationship was *outside* your committed romantic relationship”. Participants were asked a number of directed questions about the frequency, content, medium used, and motivations and risks related to their computer-mediated sexual communication (CMC-S) *within each of the relationship subsections*, as detailed below.

2.2.2. Prevalence of sexting

Participants were asked to report the frequency with which they engaged in different types of CMC-S with that romantic partner. Specifically, they were asked to indicate how often they (1) sent sex texts, (2) sent sex pictures or videos, (3) had phone sex,

and (4) had live video sex (e.g., Skype sex) with their romantic partner (6-point Likert scales from 1 = *never* to 6 = *very frequently*). Prevalence statistics were determined by calculating how many participants had engaged in these types of CMC-S more than *never*.

2.2.3. Content of picture or video messages

Participants were asked to indicate whether the content of their picture or video messages ever contained the following types of images: nude, nearly nude, engaged in a sex act with another person, engaged in a solo sex act (e.g., masturbation), or in a sexually suggestive pose (e.g., cleavage showing), but clothed. Participants were instructed to select all content types that had ever been sent to a romantic partner in that relationship category.

2.2.4. Medium used to send sex messages

Participants were asked to indicate how often they used different media (e.g., text, email, Facebook, Twitter) to send sex pictures or videos to relationship partners. Again, participants indicated frequency on 6-point Likert scales from 1 = *never* to 6 = *very frequently*.

2.2.5. Motivations for sending sex messages

Participants were asked to indicate their “usual motivation” for exchanging sex pictures or videos via all media types. Sex pictures and videos were the focus of this question (as opposed to sex texts) because this type of message has been highlighted in past research and media reports. Participants could select from one of seven options provided in the survey (e.g., flirtation or partner was away) or type in their own answer.

2.2.6. Risks associated with sending sex messages

Participants were asked how often they feared their romantic partner would forward their sex picture or video message and were also asked how often they did forward a sex picture or video message sent to them by their partner. Both questions used a Likert scale from 1 = *never* to 6 = *very frequently*.

3. Results

To provide a more detailed description of sexting among young adult college students, we recorded the frequency with which participants reported engaging in different types of computer-mediated sexual communication. All of these CMC-S data were collected within the context of specific types of relationships (committed, casual sex, or cheating); thus, the descriptive analyses that follow are presented within this context.

3.1. Descriptive analysis of content of CMC-S

Our first aim was to provide a more cohesive picture of the nature of CMC-S among young adults. To do this, we examined data from two different measures, one which measured the frequency of engagement in different types of CMC-S (sex texts, sex pictures, phone sex, and live video sex) and one which measured the specific content of sex picture and video messages. With regard to the frequency of CMC-S, Table 1 shows that sexting was fairly common across all relationship types; 55–78% of individuals had sent sex texts and 37–49% had sent sex pictures or videos to romantic partners. Additionally, overall, sexting was more prevalent than either phone sex or live video sex.

In terms of the content of picture and video messages, two statistics are relevant: the percentage of those who had sent that type of content who had *ever sent a sex picture or video message to a partner* (Fig. 1), and the percentage of those who had sent that type of content who had *ever had that type of relationship* (Fig. 2). These

Table 1

Percentage of those who had ever engaged in computer-mediated sexual communication with different types of relationship partners.

	Committed partner (%)	Casual sex partner (%)	Cheating partner (%)
Text (no pictures or video)	78	63	55
Pictures or video	49	37	45
Phone sex	46	34	36
Live video (e.g., Skype) sex	12	8	8

Note. Committed partner $n = 201$; casual sex partner $n = 123$; cheating partner $n = 53$. In each case, n represents the number of people who had ever had that type of relationship partner.

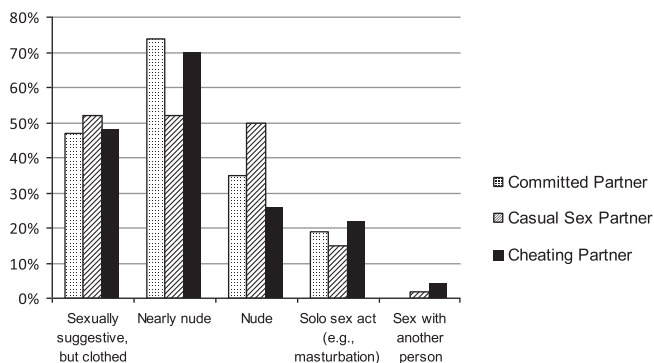


Fig. 1. Percentage of those who had ever sent a sex video or picture message to that type of romantic partner who sent the following types of content. Committed partner $n = 97$; casual sex partner $n = 46$; cheating partner $n = 23$. As this was a multiple response data set, total percentages sometimes exceed 100%.

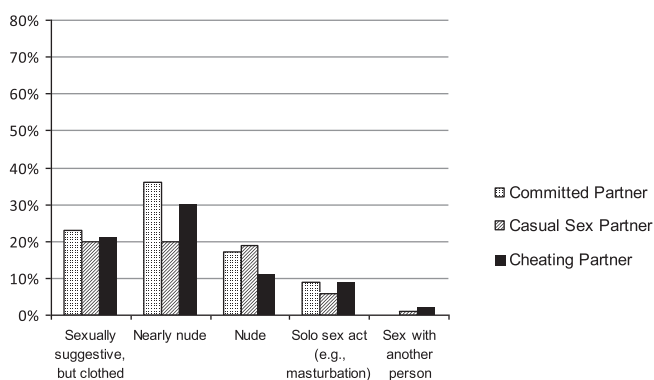


Fig. 2. Percentage of those who had ever had that type of romantic partner who had sent that romantic partner the following types of content. Committed partner $n = 201$; casual sex partner $n = 123$; cheating partner $n = 53$.

figures show the popularity of the content type among those who send sex pictures and videos to partners and among individuals in romantic relationships, respectively. Both figures show that participants were most likely to have sent pictures or videos of themselves nearly nude, and overall, they were less likely to send fully nude pictures than ones in which they wore at least some clothing. However, more explicit content was also common. As Fig. 2 shows, approximately one in five people who had been in a committed relationship or a casual sexual relationship had sent an entirely nude picture or video to their partner. Further, as Fig. 2 shows, about one in ten people who had been in a committed or cheating relationship had sent a picture or video of themselves masturbating to a partner.

3.2. Descriptive analysis of medium for CMC-S

In terms of the medium used to transmit sex messages, in relation to other types of CMC (i.e., social networking and email), text messaging was by far the most popular medium for sending sexual pictures or videos (see Table 2). Approximately one third to one half of the young adults in this sample reported sending a sex picture or video via text message. Comparatively few sent sex pictures or videos via Facebook, Twitter, or email.

3.3. Descriptive analysis of relationship context for CMC-S

In this sample, 201 individuals (79%) indicated that they had had a committed relationship, 123 (49%) indicated that they had had a casual sexual relationship, and 53 (21%) indicated that they had had a cheating relationship. With regard to differences in prevalence of CMC-S across the relationship types, Table 1 shows that a greater percentage of people had engaged in CMC-S of all types with committed partners than with casual sex or cheating partners. However, in some cases (e.g., sending sex pictures or videos), these differences were not great. The largest differences were found with sending sex texts and having phone sex; more of those with committed relationships reported having engaged in these types of CMC-S than those in casual sex or cheating relationships. In terms of the type of content of these messages, Fig. 1 shows that there was some variability across relationship type (e.g., committed partners were more likely to send nearly nude pictures/videos whereas casual sex partners were more likely to send nude pictures/videos), but overall there was much similarity across relationship types in terms of sexual content in sex pictures or videos. With regard to the medium used to transmit messages, Table 2 shows that those in casual sex relationships, especially cheating relationships, were more likely than those in committed relationships to use CMC methods other than text message (i.e., email or Facebook messages) to transmit sex pictures and videos; however, their use of these other methods was still quite low in comparison to text messages.

With regard to motivations for sending sex messages, participants reported many different “usual motivations” for sending sex pictures and videos to relationship partners, and these varied somewhat across relationship type. Overall, the most cited reasons for sending sex picture or video messages were for flirtation, because their partner asked them to send it, and to initiate sex (see Table 3). These were fairly consistent across relationship type. However, there were also some notable differences. For example, for those in committed relationships, a large proportion (approximately one in four) sent these messages because their partners were far away; however, very few in the other relationship types cited this motivation. Meanwhile, about one in four of those in a cheating relationship sent sex messages because they were bored or wanted covert communication, but those in the other relationship types rarely cited these motivations.

Finally, with regard to risks associated with sending sex messages, we examined the risk (perceived and real) of the picture

Table 2

Percentage of those who had ever sent sex pictures or videos to romantic partners via text, Facebook, Twitter, or email.

	Committed partner (%)	Casual sex partner (%)	Cheating partner (%)
Text	50	38	45
Facebook	3	4	8
Twitter	1	2	4
Email	5	7	11

Note. Committed partner $n = 201$; casual sex partner $n = 123$; cheating partner $n = 53$. In each case, n represents the number of people who had ever had that type of relationship partner.

Table 3

Participants' usual motivations for sending sexual pictures or videos to different types of relationship partners.

	Committed partner (%)	Casual sex partner (%)	Cheating partner (%)
Flirtation	27	19	33
Partner asked me to	23	38	13
Shy to say/do face-to-face	2	2	0
Wanted to initiate sex	15	26	29
Wanted covert comm.	0	0	13
Boredom	2	6	13
Partner was far away	26	4	0
Other	5	4	0

Note. Committed partner $n = 99$; casual sex partner $n = 47$; cheating partner $n = 24$. In each case, n represents the number of people who had indicated that they had sent sexually explicit pictures to that type of relationship partner more than "never."

Table 4

Percentage of those who feared their romantic partner would forward the picture or video and those who actually did forward the picture or video.

	Committed partner (%)	Casual sex partner	Cheating partner (%)
Feared forwarding	26	53	46
Did forward	3	15	21

Note. Committed partner $n = 99$ for "feared forwarding", $n = 100$ for "did forward"; casual sex partner $n = 47$ for "feared forwarding", $n = 61$ for "did forward"; cheating partner $n = 24$ for "feared forwarding", $n = 29$ for "did forward". In each case, n represents the number of people who had indicated that they had sent sexually explicit pictures more than never.

or video being forwarded by different types of relationship partners. Table 4 shows that those in casual sex and cheating relationships were twice as likely to fear their pictures or videos being forwarded as those in committed relationships. In terms of the real risk of forwarding, those in casual sex relationships were five times as likely, and those in cheating relationships were seven times as likely, as those in committed relationships to forward the pictures their partners sent them.

4. Discussions

In this study, we conducted a granular analysis of sexting among young adults to develop a more cohesive picture of sexting practices in this population. Our descriptive analyses focused on the content of CMC-S, the medium used to transmit CMC-S, and the relationship contexts in which these transmissions occurred. Similar analyses have been done recently with youth samples (Mitchell et al., 2012) to help resolve some of the methodological issues that have arisen in the early sexting research (Lounsbury et al., 2011).

In terms of content, we found that sending sex texts (words only) was the most popular form of CMC-S. Fewer of our young adults reported sending sex pictures or videos or engaging in phone sex, and only a very small percentage had engaged in live (e.g., Skype) sex. That said, one third to one half of the sample had sent a sex picture or video message to a relationship partner. Overall, the content of these messages tended to be less explicit (e.g., nearly nude) than more explicit (e.g., nude or masturbating); however, a fair number of young adults had sent pictures of themselves nude (about one in five) or masturbating (about one in ten) to relationship partners. Although the prevalence rates are much higher than those found in youth samples (Mitchell et al., 2012), the trends are somewhat similar in that more people reported sending sexual content that was less explicit. With regard

to a definition of sexting, it is apparent that "nude or nearly nude" does not cover the scope of sexual content that is being transmitted to relationship partners. Also, although this was not the focus of the present study, there are likely to be differences between people and relationships where less explicit content (e.g., clothed, but suggestive) is being exchanged versus those in which more explicit content (e.g., nude or masturbating) is being exchanged. Thus, the present findings, as well as those from Mitchell et al. (2012), suggest that more detailed, delineated definitions of sexting content, as opposed to general definitions (e.g., "sexually suggestive") would be more appropriate for measures of sexting in future studies.

With regard to the medium used to transmit messages, the trends were very clear; young adults used text messaging much more than any other CMC device to transmit messages of a sexual nature. This corresponds nicely with Mitchell et al. (2012), who found the same trends in youth samples. However, even though text messaging is the primary method used to transmit sex pictures and videos, it is not the only method; hence, future definitions and research questions involving sexting should not be limited to text messaging only. Moreover, future research might examine more closely, and with larger samples, the ways in which relationship status affects the medium used to transmit sex messages. For example, our research suggests that sexual communication that needs to be more covert (e.g., in cheating relationships) may be more likely to occur via email and social networking (e.g., Facebook and Twitter) messages than sexual communication that is more open (e.g., in committed relationships). This gives context to the recent media reports of a cheating scandal over Twitter (Canning & Hopper, 2011) and also suggests that future research into the issue of covert sexual communication is warranted.

Finally, one of the distinct lines of inquiry in the present research was examining the prevalence, motivations, and risks of sexting in different types of romantic relationships. Drouin and Landgraaf (2012) suggested that sexting needed to be examined within different relationship contexts, as their analyses focused only on committed relationships, and some other researchers did not specify a relationship context (Weisskirch & Delevi, 2011). Our analyses showed that the prevalence of CMC-S of all types was highest in committed relationships; thus, examining these behaviors within committed relationships will likely produce the largest sample of those engaging in CMC-S. However, the motivations for sending sex pictures or videos in different relationship contexts (committed, casual sex, and cheating) were somewhat different, and the risks (perceived and actual) associated with sending sex pictures or videos to different types of romantic partners were very different. Consequently, researchers examining the personality or relationship characteristics that are associated with sexting behaviors may wish to have participants specify the relationship context in which the CMC-S occurs. These relationship contexts should also be at the forefront of focus group discussions and initiatives with youth and young adults, with special attention being drawn to the real and perceived risks of sexting in these different types of romantic relationships.

4.1. Limitations and conclusion

As with any study, ours does have limitations. Most notably, our study focused on a sample of undergraduates in the United States. This sample is, by no means, representative of all American young adults; however, because the study was exploratory, with the goal of exploring the diversity and complexity of sexting practices within a cohort of young adults, our analysis suggests that sexting among young American adults is at least as complex as what was shown here. Therefore, those who are interested in studying this issue further, with more diverse samples (non-college young

adults and even in older adults, as suggested recently by Wiederhold (2011), should expand their definitions of sexting at least as much as what has been done here and in Mitchell et al. (2012). An additional limitation is that our inquiries into the nature of sexting reflect only the little empirical work that has been done on the topic thus far. Hence, this study does not provide an exhaustive view or definition of the sexting practices of today's young adults; instead, it provides a snapshot of CMC-S within this age group, guided by the empirical findings to date. As technologies change and emerge, the definition of sexting and major questions relevant to CMC-S will likely need to be revisited.

Despite these limitations, our study provides a much-needed framework for the examination of sexting among young adults. Our descriptive analyses suggest that sexting researchers should include more detailed questions about content, medium, and relationship context in their studies in order to capture the full-scope of motivations and risks associated with sexting behaviors. Moreover, as the first to delineate each of these sexting characteristics in a young adult sample, our study provides a more detailed picture of the sexting behaviors of today's young adults.

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DROUIN EXHIBIT 4

Sexting Behaviors Among Young Hispanic Women: Incidence and Association with Other High-risk Sexual Behaviors

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Abstract Several legal cases in the United States in which adolescents were charged with child pornography distribution after sharing nude photographs of themselves with romantic partners or others have highlighted the issue of sexting behaviors among youth. Although policy makers, mental health workers, educators and parents have all expressed concern regarding the potential harm of sexting behaviors, little to no research has examined this phenomenon empirically. The current study presents some preliminary data on the incidence of sexting behavior and associated high risk sexual behaviors in a sample of 207 predominantly Hispanic young women age 16–25. Approximately 20% of young women reported engaging in sexting behavior. Sexting behaviors were not associated with most other high-risk sexual behaviors, but were slightly more common in women who found sex to be highly pleasurable or who displayed histrionic personality traits.

Keywords Sexting · Sexual health · Adolescent development

Introduction

Sexting is a colloquial term that refers to individuals sending explicit photographs or messages to others. Several cases of sexting have caused alarm over potential harmful consequences. In recent years young female celebrities such as Miley Cyrus and Vanessa Hudgens experienced having personal sexual photographs of themselves widely released. At least one teenager is known to have committed suicide after nude photographs of her were circulated to peers by an ex-boyfriend [1]. Given concerns that teens and adults who engage in sexting may experience serious embarrassment and social consequences should photographs escape their control, legal and youth health experts have struggled with how best to address this relatively new phenomenon.

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In the United States and elsewhere [2], some lawmakers have taken advantage of child pornography laws to attempt to enforce harsh penalties on some youth in order to set an example. For example in Pennsylvania, six youths were charged with felony child pornography distribution after three girls were found to have sent nude photographs of themselves to boyfriends [3].

To date, little peer-reviewed research has been done on sexting behavior (a basic search for “sexting” on PsychINFO and Medline turned up no hits, nor did a more general search for sexual behavior linked to internet technology). One study by the National Campaign to Prevent Teen and Unplanned Pregnancy [4] has previously examined this phenomenon, finding that approximately 20% of teenagers and 33% of young adults have exchanged semi-nude or nude photographs with others electronically, with women slightly more prone to engage in these behaviors than males. A second study by Lenhart [5] found somewhat lower rates (4–8%) of sexting behaviors among teens. The current study hopes to add to this limited data by providing further information on the incidence of sexting behaviors (sending nude photographs of oneself to others), and the relationship of sexting with other sexual behaviors. This study focuses specifically on sending and receiving explicit photographs, as it is these behaviors which have attracted legal attention, and which may have the greatest risk of causing future harm or embarrassment.

Methods

Participants

Participants in were 207 young women enrolled at a Hispanic Serving university in the South. Their average age was 20.70 years ($SD = 2.22$). Regarding ethnicity 199 (96.1%) were Hispanic, 5 were white non-Hispanic (2.4%), and 1 respondent each fell in the category of black, Asian or other.

Materials

For the purposes of this study a survey of sexual behaviors including high-risk sexual behaviors, sexting behaviors and attitudes toward sexting, contentment with one's own sexual relationships (whether engaging in sex or abstaining) and experiencing of pleasure in sexual behaviors (from kissing to intercourse) was developed. Respondents were asked questions related to number of sexual partners, having experienced a sexually transmitted disease, having become unintentionally pregnant or having elected to abort a healthy pregnancy. Respondents were asked how frequently they “sent erotic or nude photographs of myself (sexting) to another person” and “received nude/erotic photographs from another person”. Respondents were also asked a series of five questions about attitudes toward sexting such as “Sending nude photographs of myself to other people has too many risks” or “Sending nude photographs of myself could be exciting or fun”. Coefficient alpha of sexting attitude questions for this sample was 0.77. Questions related to contentment with sex life included “I feel in control of my sex life”, “Sex (or my decision to abstain) has been a wonderful and healthy part of my life” with a coefficient alpha between these six questions of 0.71. Experiences of pleasure in sex included questions such as “I regularly find sexual behavior (from kissing to intercourse) pleasurable” and “Sexual behavior (from kissing to intercourse) is a fun and enjoyable activity” with coefficient alpha between the seven items of 0.70. All questions were worded so that they could apply equally to a

sexually active individual or to women who had made a choice to abstain from sexual intercourse. These questions were all 4-point Likert-scale items (Never true, Seldom, Very often, Always true). The full questionnaire is available on request from the author.

As individuals with histrionic personality disorder tend to be more sexually seductive and outgoing, histrionic personality symptoms were considered. A 16-item questionnaire of Histrionic personality symptoms developed from DSM-IV criteria [6] was also administered. Items were 4-point likert-scale and included “I like to be the center of attention” “A lot of people find me sexually appealing” and “I tend to change my romantic partners often.” Coefficient alpha of this scale for the current sample was 0.84.

Procedure

Respondents filled out the survey in a laboratory setting so that responses were private and fully anonymous. Once surveys were completed they were dropped by the participants in a sealed “lock box” that was not opened until all participants had completed (a process that took several months). Thus participants were assured that their responses could not be matched to their identities by the research assistants (who were themselves female) present in the laboratory. While surveys were being administered, no males were present in the laboratory facility. All study procedures were compliant with local IRB and designed to meet APA standards for research with human participants. Data were analyzed using SPSS statistical software, employing correlational and regression designs.

Results

Incidence

Data from the current sample indicated that 20.5% of young women reported sending erotic or nude photographs of themselves to others at least once. In the current sample 34.5% reported receiving erotic photographs from others at least once. A χ^2 test of non-independence revealed that these two variables tend to be highly related, $\chi^2(9) = 109.76$.

Correlation with Other High-risk Sexual Behaviors

Bivariate correlations were run between frequency of sexting behaviors and other high-risk sexual behaviors. A Bonferroni correction of $P = 0.005$ was applied to control Type I error rates due to multiple comparisons across all bivariate analyses. Results for these correlations are presented in Table 1.

Table 1 Correlations between sexting behavior and other sexual behavior outcomes

	Partners (1 year)	Partners (life)	STDs	UP	Abort	US	Pregnancy risk
Sexting	0.02	0.17	0.04	0.09	.14	.07	0.24*

UP unplanned pregnancies, Abort history of elective abortion, US history of unprotected sex with new partners; pregnancy risk = unprotected sex with any partner when pregnancy was not desired

* $P \leq 0.005$

Sexing was not related to other high-risk sexual behaviors with the exception of having sex without use of birth control methods. A separate stepwise regression on this last variable was run with marital status as a control variable, but this did not break this relationship.

Correlation with Sexual Satisfaction and Sexing Attitudes

Bivariate correlations were used to examine the relationship between sexting and contentment with sex life, pleasure in sex and sexting attitudes. Results indicated that sexting behaviors did not correlate with contentment with sex life ($r = -0.09$), but did correlate significantly with pleasure in sex ($r = 0.20$). Sexting behaviors were highly correlated with positive attitudes toward sexting ($r = 0.69$).

Sexing and Histrionic Personality Symptoms

To assess whether sexting behaviors were more common among women with histrionic personality traits a stepwise multiple regression was employed with age, GPA and histrionic traits. The resulting model was significant [$R = 0.21$, Adjusted $R^2 = 0.04$, $P \leq 0.01$], with only histrionic traits ($\beta = 0.21$) as a significant predictor of sexting behavior.

Discussion

Several important findings are gleaned from the current study. First, incidence rates for sexting behavior for current sample indicate that, although the majority of young women do not engage in sexting, it nonetheless a relatively common (20.5%) behavior in the current sample. Results also suggest that for the majority of women who engage in sexting, this is a mutual and consenting activity, although this may not always be the case. Further testing is warranted to ascertain the degree to which these behaviors are consenting or coerced. Nonetheless it appears likely that the majority of women engaged in sexting view this activity as an exciting facet of their sexual lives. Sexting was not associated with other high-risk sexual behaviors, aside from failure to use birth control when not seeking pregnancy. Sexting was more common among women who enjoy their sexual behaviors generally, as well as among women with Histrionic personality traits, although both these relationships were relatively small.

Although the majority of women who engage in sexting appear to have positive attitudes about the behavior, risks of embarrassment and (for minors) legal repercussions remain should these young women lose control over the photographs. Legal responses that focus on felony charges for minor individuals engaged in sexting do not appear consistent with risks, and several states appears to be introducing legislation to legalize sexting between sexually involved minors [7, 8]. Given that minors are not legally prohibited from actual sexual behavior with each other, criminalization of consenting, shared nude photographs may represent a disconnect between the law and technology rather than a reasoned response to this issue. Public education campaigns which focus on teenagers and educate them regarding the risks of sexting and other issues related to digital safety in a reasoned, non-emotional and non-moralizing fashion would arguably be more likely to bear positive fruit than criminalization.

The current study is preliminary and not without limitations. The current sample is convenience in nature and comprised mainly of Hispanic women. Thus generalization to other groups should only be undertaken with great care. As with any survey data on sensitive topics, socially desirable responding is always a risk.

It would be desirable for future research to probe more broadly at problematic outcomes that may be associated with sexting behavior, such as depression, bullying or negative experiences related to sexting incidents. It is hoped that this article will provide some initial data on this new phenomenon and provide groundwork for future research.

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DROUIN EXHIBIT 5

2009 AP-MTV DIGITAL ABUSE STUDY

Objectives/Background

As part of its multi-year public affairs campaign to address the emerging issue of teen digital abuse, MTV partnered with the AP on a study that provides an in depth look at the prevalence of digital abuse among young people today. This research was designed to quantify how young people are affected by and respond to issues like sexting, digital harassment and digital dating abuse.

Methodology

Respondents were recruited from KnowledgePanel®, the only online panel that is representative of the U.S. population, bringing unprecedented reliability and statistical projectability to online survey research. KnowledgePanel members are randomly recruited by telephone through Random-Digit Dial (RDD) sampling and by mail through Address-Based Sampling (ABS), which better accounts for the growing number of cell-phone only households in the U.S. To capture the full range of consumers, KN provides non-Internet recruits with access to the Internet via a laptop.

In total 1,247 respondents, ages 14 to 24, were interviewed. The survey was fielded online from September 11 through September 25, 2009, and the mean survey length was approximately 15 minutes.

KEY FINDINGS

I. PERVASIVENESS AND FREQUENCY OF DIGITAL ABUSE

HALF OF ALL YOUNG PEOPLE HAVE BEEN THE TARGET OF SOME TYPE OF DIGITAL ABUSE

50% of people age 14-24 have experienced digitally abusive behavior.¹

- People age 18-24 are slightly more likely than teens to have been targeted – 52% vs. 47%.
- Among teens, females are more likely to have been targeted than males – 53% vs. 42%.

Young people regularly encounter digital abuse - from the mild to the extreme.

- Young people indicate that they are most likely to have experienced the following types of digital abuse:
 - o Spreading lies – someone wrote something about them online or in a text message that wasn't true (22%).
 - o Violation of trust – someone forwarded an email or IM they had sent without permission (20%).
 - o Digital disrespect – someone wrote something about them online or in a text message that was really mean (19%).
- Among those who have experienced these types of harassment, more than half report that it has

happened more than once.

- Nearly half of young people (45%) report that they see people being mean to each other on social networking sites.
- Some of the more extreme forms of digital abuse, such as impersonation, blackmail or pressure to sext occur less frequently, but still affect a number of young people.
 - o More than 1 in 10 have been the victim of impersonation, either by someone logging into their profile without permission (12%) or by someone making a fake profile (6%).
 - o 11% report that they have been pressured to send a naked photo or video of themselves to someone else.
 - o 8% say that they have been threatened with digital blackmail.

II. SEXTING

ROUGHLY ONE-THIRD HAVE ENGAGED IN SEXTING RELATED ACTIVITIES

3 in 10 young people report having been involved in some type of naked sexting.

- Incidence overall is higher among 18-24s (33%) than 14-17s (24%).
- Similar numbers (29%) report receiving messages “with sexual words or images” by text or on the internet.

1 in 10 has shared a naked image of themselves.

- Females are slightly more likely to have shared a naked photo or video of themselves (13%) than males (9%).
- Those who have shared a naked photo or video mostly report that they initially sent the photo to a significant other or romantic interest. However, 29% of those who have sent sexts report sending them to people they only know online and have never met in person. 24% sent sexts to people they wanted to date or hook up with.
- While females are more likely to share naked photos or videos of themselves, males are more likely to report receiving a naked photo or video of someone else that has been passed around – 14% vs. 9% of females.
- 61% of those who have sent a naked photo or video of themselves have been pressured by someone else to do so at least once.

Almost half of sexually active young people report being involved in sexting.

- 45% of young people who report having had sex in the past 7 days also report at least one sexting related activity.

- Sexually active young people are also twice as likely to have shared naked photos of themselves – 17% vs. 8% of non-sexually active young people.

Sexts often have unintended viewers and are often forwarded as a form of social currency by those looking to show off or be funny.

- Nearly 1 in 5 sext recipients (17%) report that they have passed the images along to someone else. More than half (55%) of those who passed the images to someone else say they shared them with more than one person.
- The most popular reasons given for forwarding sexts include the assumption that others would want to see them (52%), a desire to show off (35%), and boredom (26%).
 - Teens also report that they have shared sexts as joke (31%) or to be funny (30%).
- 14% of young people who have shared a naked photo or video of themselves suspect that the recipient probably shared the image with someone else without permission.

Young people have complex views of sexting, with respondents characterizing it as everything from “hot” and “trusting” to “uncomfortable” and “slutty”.

- Those involved in sexting are likely to use words like “flirty”, “exciting”, “hot”, “fun” and “trusting” to describe the practice.
- Those who don’t sext find it “gross”, “uncomfortable” and “stupid”.
- Interestingly, boys are more likely to describe sexting as “hot” than girls, while girls are more critical. More than half of girls call sexting “slutty”, “stupid” and “dangerous”.

III. DIGITAL DATING ABUSE

TECHNOLOGY OPENS NEW AVENUES FOR MANIPULATION AND CONTROL AMONG YOUNG PEOPLE IN RELATIONSHIPS

- Almost a quarter of young people currently in some sort of romantic relationship report that their boyfriend or girlfriend checks up with them multiple times per day, either online or on a cell phone, to see where they are, who they’re with or what they’re doing.
 - 22% say they feel like their significant other checks up on them too often, while 15% say that their significant other complains that they check up too often.
- More than 1 in 4 say their boyfriend or girlfriend has checked the text messages on their phone without permission.
- 12% have had a boyfriend or girlfriend call them names, put them down, or say really mean things to them on the Internet or cell phone.
- Other ways digital platforms are changing the dynamics of youth relationships and creating new forms of dating abuse include:
 - More than 1 in 10 have had a boyfriend or girlfriend demand passwords.
 - Roughly 1 in 10 have also had a significant other demand that they “unfriend” former boyfriends/girlfriends on social networks.

IV. CONSEQUENCES AND RESPONSES

FEW CONSIDER THE MORE SERIOUS CONSEQUENCES AND RISKS OF THEIR DIGITAL BEHAVIOR, AND IN SOME CASES ARE UNWILLING TO INTERVENE OR REPORT ABUSE WHEN IT HAPPENS

Young people recognize that digital abuse is a problem, but the real risks and consequences are far from top of mind.

- Roughly 7 in 10 (69%) say that digital abuse is a serious problem for society that should be addressed, while 76% say that it is a serious problem for people their age.
- Despite their general concern about this problem, young people are unlikely to worry about the potential for serious consequences of their actions in the digital sphere.
 - o Only about half (51%) of young people say they have thought about the idea that things they post online could come back to hurt them later.
 - o Fewer still are aware of the types of problems that could arise from their digital actions:
 - Just 1 in 4 have given at least some thought to the idea that things they post online could get them in trouble with the police.
 - Only 28% of students have considered that they could get in trouble at school for things they do online, while just 29% of those with jobs had considered that they could get in trouble with their boss.

Most young people are okay with reporting group bullying, but are ambivalent towards how to respond to instances of individuals abusing others.

- More than half of young people feel that if they witness someone being picked on by a group of people, it is “always” okay to report it to an authority (55%).
- Physical harm is also a deal breaker, as 78% indicate that it is always okay to report when someone harms another person physically.
- When it comes to instances of individual bullying with emotional consequences, what is and is not okay becomes less clear.
 - o Fewer than 3 in 10 feel that it is always okay to report when someone is embarrassing or upsetting another person.
 - o Young people are split as to how they would react if they witnessed someone being bullied on a social network, with half reporting they would ask the bully to stop (47%) and half reporting they are likely to do nothing (54%).

If harassed, asking the bully to stop is the first line of defense; consulting a friend is second.

- Slightly more than 6 in 10 indicate that they are likely to ask the bully to stop if they find themselves the victims of digital abuse or harassment (62%).
- Similar numbers also report that they would ask a friend for help (59%), while a little over half say that they would ignore the harasser or bully (56%).
- Among teens, parents are also a top resource. Nearly 6 in 10 teens (58%) indicate that they would tell their parents, compared to 36% of 18-24s.

Sharing passwords associated with digital abuse.

- More than 1 in 4 (26%) report that they have shared an online password with someone.
 - o Females (31%) are more likely to have shared passwords than males (22%).
 - o Among those who have shared online passwords, more than half (54%) report sharing it with a “close” friend.
- Those who have shared passwords are more likely to report having been a target of digital abuse – 68%, compared to 44% who have not shared their passwords.

V. IMPACTS AND RISK FACTORS

VICTIMS OF DIGITAL ABUSE ARE MORE LIKELY TO ALSO ENGAGE IN HIGH RISK BEHAVIORS AND CONTEMPLATE SUICIDE

More than half of those bullied report being upset by it. Rumors and untruths are deemed most hurtful.

- 56% of those who have been bullied report that they were “very” or “extremely” upset the most recent time they were targeted.
- Those who were the victims of rumors or untrue gossip seemed most upset by the bullying, as 63% of those who said untrue rumors about them had been spread digitally admit that this upset them.

Association seen between digital abuse and mental health.²

- Young people who have been the target of digital bullying are twice as likely to report having received treatment from a mental health professional, 13% to 6%, and are nearly three times more likely to have considered dropping out of school, 11% to 4%.
- Digital abuse can also be linked to risk of suicide; 8% of targets and 12% of sexters have considered ending their own life in the past year compared to 3% of people who have not been bullied and are not involved in sexting.

Other risky behaviors are linked to digital abuse.

- Young people who have reported smoking a cigarette, drinking alcohol, using illegal drugs or stealing/shoplifting in the past seven days are more likely to have been the target of digital abuse – 60%, compared to 48% among those who have not done any of those things in the past seven days.
- Sexually active young people are also more likely to have been the target of digital abuse – 62% of those who have had sex in the last seven days have been target compared to 49% who have not.

DIGITAL ABUSE AND SEXTING AFFECT YOUNG PEOPLE FROM ALL WALKS OF LIFE, WITH CERTAIN YOUTH APPEARING MORE AT RISK

Whether rich or poor, black or white, digital abuse touches young people from all parts of society.

- Digital abuse is as much an issue in the city as the suburbs, and targets young people of all races, socio-economic backgrounds, and regions of the country.

- Academic achievement also does not have an effect – A students are just as likely as C students to be targeted.

Teens in single-parent households run a higher risk of being targeted.

- 63% of teens living in single-parent households reported being a target of digital bullying, compared with 45% of those who live with two or more adults.³
- Teens in single-parent households are also more likely to be sexting – 47%, compared to 21% living with two or more adults.

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¹ Targets report having had at least one of the following happen to them: 1) Someone wrote something about you on an Internet page that wasn't true 2) Someone shared/sent to another person an email or IM you had sent them that you didn't want shared 3) Someone wrote something about you on an Internet page that was really mean 4) Someone used email, IM or cell phone text messages to spread rumors about you that weren't true 5) Someone used an e-mail message, IM or cell phone text message or post on an Internet page to threaten to harm you physically 6) Someone impersonated you by logging into your email account or Facebook, MySpace, Twitter or other Internet account without your permission 7) Someone spied on you by logging into your email account or Facebook, MySpace, Twitter, or other Internet account without your permission 8) Someone put embarrassing pictures or videos of you on an Internet page without your permission 9) Someone used email, IM, text messaging or a site like Facebook or MySpace to say they were interested in dating you, and later told you they were only pretending 10) Someone found embarrassing information about you on the Internet and used it to tease you in person 11) Someone videotaped or photographed you doing something embarrassing without your knowledge and shared it with other people 12) Someone threatened to send e-mail, text messages or post things on sites like Facebook or MySpace telling other people private things about you, true or untrue, if you didn't do as they demanded 13) Someone found some embarrassing information about you on the Internet and shared it with other people without your permission 14) Someone sent you email, IM or cell phone messages encouraging you to hurt yourself 15) Someone impersonated you by creating a fake Facebook/MySpace profile for you 16) Someone took photos or videos of me in a sexual situation that I was not aware were taken and shared them with others 17) Was pressured by someone to send them naked pictures or videos of myself

² Though an association has been observed, it does not prove causation in these cases

³ Small base size, but differences are statistically significant